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EXAMINER
YEN, ERIC L

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@dblaw.com

	Application No.	Applicant(s)
	10/814,081	CHOU ET AL.
Office Action Summary	Examiner	Art Unit	
	ERIC YEN	2626	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 January 2010</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1 and 3-18</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1, 3-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   In response to the Office Action mailed 10/23/09, applicant has submitted an

amendment filed 1/25/10.

        Claims 1, 3, 6-10, 12-13, 15, and 18, have been amended. Claim 2 has been

cancelled.

Response to Arguments

1.   Applicant's arguments filed 1/25/10 have been fully considered but they are not

persuasive.

        Applicant again provides arguments related to Li and Segond providing "different

solutions to a subtly different problem" (Amendment, page 10). Applicant argues that

the rejection is not proper because "the examiner's rejection relies on an interpretation

of 'word class information' that is at odds with applicant's explicit definition", citing MPEP

2111.01(iv) (Amendment, page 11).

        Applicant, however, did not provide any portion of the Specification that

specifically defines the term "word class information", and no such definition exists in

the Specification. Definitions of the term in a manner that is given patentable weight in

the claims must be <u>explicitly</u> defined (i.e., "word class information means…" or "word

class information is…"). Since no such recitation or any other equivalent appears in the

Specification, the claim language "word class information" is given its broadest

reasonable interpretation without reading the Specification into the claims.

Applicant argues that the purpose of the claims is not to define terms but is to

define the scope of the invention. (Amendment, page 11). While this is true, the scope

of the invention is limited to the broadest reasonable interpretation of the terms in the

claims, which are broader in scope than whatever applicant intends the claim language

to mean unless further words are added so as to limit the claim scope to only applicant's

intended definition and nothing else.

Therefore, the examiner maintains similar prior art rejections to those previously

presented.

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

Claims 1, 4-6, 10-14, and 18, are rejected under 35 U.S.C. 101 because the

claimed invention is directed to non-statutory subject matter.

While applicant's amendments to the claim language designed to overcome the

101 rejections under In Re Bilski are acknowledged, they do not successfully overcome

the rejections because they only require that the communication be received at a

processor-based device. Current office interpretation of In Re Bilski requires that the

"heart of the invention" be performed by a machine. In the claims must recite that the
classification being performed by a machine.

Also no amendments were made to recite "non-transitory medium" in Claim 18,
and so it is still non-statutory.

claims 1, 4-6, 10-14, are rejected under 35 U.S.C. 101 as not falling within one of
the four statutory categories of invention.   Supreme Court precedent1[1] and recent
Federal Circuit decisions2[2] indicate that a statutory "process" under 35 U.S.C. 101
must (1) be tied to another statutory category (such as a particular apparatus), or (2)
transform underlying subject matter (such as an article or material) to a different state or
thing. While the instant claim(s) recite a series of steps or acts to be performed, the
claim(s) neither transform underlying subject matter nor positively tie to another
statutory category that accomplishes the claimed method steps, and therefore do not
qualify as a statutory process.

The claims are directed to classification processes and calculations that do not
require a machine to perform. Even though a human may have greater difficulty than a
machine in performing the more complex calculations, they can still be done without the
use of a machine. "Joint classifier" is not sufficient to require a machine because a
human can just as easily classify a particular word into a word class using word
information and word class information. This distinction is further evidence by claim 2
which, as a dependent claim, should narrow the scope of its parent claim, and which

————————————————

states that the classifier is narrowed to a processor-based device. This at least

suggests that the joint classifier need not be a processor and consequently need not be

a machine. Therefore, the method independent claims and all dependent claims that do

not require a machine in its claim scope are non-statutory under In Re Bilski.

Also, under current procedure, since applicant did not define "machine-readable

medium" in the Specification, the machine-readable storage medium of Claim 18 is non-

statutory because its current scope includes transitory media including carrier waves

and signals. While "article of manufacture" and "storage" suggests a solid tangible

medium, to remove any ambiguity the phrase "non-transitory" should be amended into

the claims and applicant should point out in the next response precisely where a

computer or other non-transitory medium is supported in the Specification (either

through inference from mechanical operations, or otherwise).

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1,15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by

Segond et al. (US 6,405,162), hereafter Segond.

As per Claims 1, 15, 18, Segond teaches a method, and corresponding apparatus and article of manufacture comprising a machine-readable storage medium containing software code (Figure 4) comprising receiving, at a processor-based device, a communication that comprises at least one word ("input text... word that has more than one sense", col. 6, lines 32-41; where the text containing the words is a communication and the words themselves are "communications comprising at least one word" because they communicate meaning themselves) and

classifying the communication by utilizing a joint classifier based on application of word information and word class information ("employ has two syntactic senses", col. 12, lines 19-30; "disambiguate a word", col. 6, lines 29-32; "input text... includes semantically ambiguous word... rule that is applicable to words that occur in a context designated 'X'... applicable to words that occur in context 'Y'", col. 6, lines 32-41; "context information can be obtained... context in which word occurs in input text", col. 6, lines 42-48; "disambiguate... selecting one sense that applies to the instance of the word", col. 5, lines 59-67; "sense... distinct meanings", col. 5, lines 49-52; See Response to Arguments, where the disambiguation [joint classification] is performed by combining information about what the multi-sense ambiguous word is [word information] and the different context rules/information [word class information, where the words that occur in a context X are a class/set of words occurring in the context X] that narrow the number of senses/meanings of the ambiguous word [word information] to the meaning

in the specific context [word class information] using the word itself [word information]

and the rule [word class information].)

As per Claim 16, Segond teaches wherein the processor-based device

comprises a switch ("Sun workstation... keyboard... mouse", col. 8, lines 22-29; where

whether it is the computer's power switch, or any combination of keyboard presses or

mouse clicks serve to activate a computer function, the computer contains a switch of

some sort).

As per Claim 17, Segond teaches wherein the processor-based device

comprises a processor coupled to a memory (Figure 4; "memory", col. 8, lines 22-29).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Segond,

as applied to Claim 2, above, and further in view of Lee et al. (US 6,925,432), hereafter

Lee.

As per Claim 3, Segond fails to teach wherein a natural language call routing element routes the communication to a particular one of a plurality of destination terminals of the system based on a determined category.

Lee teaches wherein the processor-based device routes the communication to a particular one of a plurality of destination terminals of the system based on a determined category ("call routing... posing a disambiguating query", col. 2, lines 12-31; "automated natural language based classification system... improved ability to discriminate between alternative classifications", col. 2, lines 55-65; "routes the call to the appropriate one of the New Accounts... Checking Department", col. 8, 7-25; Figure 2; "use of the word 'my' can be used to indicate that the caller wants to know... existing", col. 8, lines 26-49; "voice recognition unit... disambiguation module are capable of routing", col. 8, line 50 – col. 9, line 4; "converted to text... routing module... route the call to one of a plurality of possible destinations... if... generate a set of candidates, but is unable to reduce the set to a single unique destination", col. 9, lines 5-27; where Lee teaches a similar disambiguation system which provides a practical application to disambiguation systems like Segond's [i.e., call routing], and the combination can be made through simple substitution of the automatic disambiguation function in Lee [which determines my checking account refers to an existing account] with the disambiguation process in Segond to achieve the predictable result of a call routing system that disambiguates inputs with multiple meanings. Lee's example of classifying "checking account" based on the word "my" is an example of automatic classification into a determined category [col. 8, lines 26-49]. Also the destinations at

least obviously are terminals since the system in Figure 2 is implemented

mechanically.)

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of invention to modify Segond to include the teaching of Lee of wherein a natural

language call routing element routes the communication to a particular one of a plurality

of destination terminals of the system based on a determined category, in order to

provide a practical and useful application for a disambiguation function, as described by

Lee (col. 8, lines 7-49; where routing a call to its proper destination is a useful

application of disambiguation function).

6.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Segond,

as applied to Claim 1, above, and further in view of Sakai et al. (US 7,099,819),

hereafter Sakai.

As per Claim 4, Segond fails to teach wherein an automatic word class clustering

algorithm is utilized to generate the word class information.

Sakai teaches wherein an automatic word class clustering algorithm is utilized to

generate the word class information ("category decision rules... each text is classified to

a category according to the category decision rule", col. 3, lines 35-50; "automatically

creates a new category", col. 6, line 53 – col. 7, line 5; "if a cluster consisting of a large

number of texts... new category to which this cluster is classified", col. 6, lines 34-40;

"cluster generation unit", col. 6, lines 7-24; where the clustering is automatically

performed and whose results is used for a new word class, and so it is an automatic word class clustering algorithm and is used to generate new word class [i.e., category] rules/information).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Segond to include the teaching of Sakai of an automatic word class clustering algorithm is utilized to generate the word class information in order to provide a system is capable of adapting and improving itself, as described by Sakai (col. 6, line 53 - col. 7, line 5).

7.   Claims 5-6, 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segond, as applied to Claim 1, above, and further in view of Li et al. ("Improving Latent Semantic Indexing Based Classifier With Information Gain"), hereafter Li.

As per Claim 5, Segond fails to teach wherein the word information and word class information utilized is selected using information gain based term selection

Li teaches wherein the word information and word class information utilized is selected using information gain based term selection ("Information Gain in Term Selection... classification task", Section 2; "literal terms... may not match those of a relevant document", Section 1, paragraph 1; "IG enhanced... classified... categorize an unknown document", Section 3; where Li teaches an alternative classification method using information gain based term selection that includes defining/selecting categories [word class information] and terms [word information], and since disambiguation in

general is a classification task [to determine whether a word should be given its

meaning in one context or another] and so information gain based term selection can be

used as a simple substitute to predictably perform the

categorization/classification/disambiguation of a word in Segond).

Therefore, it would have been obvious to one of ordinary skill in the art to perform

a simple substitution of Segond's disambiguation classification method with Li's

information gain based term classification method, because Li's classification and

Segond's disambiguation both categorize/classify text, and so one of ordinary skill in the

art could have substituted one classification method for another to obtain a predictable

result of classified text.

As per Claim 6, Segond fails to teach wherein the information gain based term

selection determines an information gain value for each of a plurality of terms, the

information gain value being indicative of entropy variations over a plurality of possible

categories, and being determined as a function of a perplexity computation for an

associated classification task.

Li teaches wherein the information gain based term selection determines an

information gain value for each of a plurality of terms, the information gain value being

indicative of entropy variations over a plurality of possible categories, and being

determined as a function of a perplexity computation for an associated classification

task ("significance of the term based on the entropy variations of the categories, which

relates to the perplexity of the classification task", Section 2; "literal terms… may not

match those of a relevant document", Section 1, paragraph 1; "IG enhanced…

classified… categorize an unknown document", Section 3; where the entropy variations

are taught by Li to relate to perplexity and so an entropy calculation is also a perplexity

calculation and Equation 1 describes the information gain value being calculated from

entropy/perplexity. Also the subscript t_i at the end of Section 2 at least suggests that

there is more than one term for which the information gain is calculated).

Therefore, it would have been obvious to one of ordinary skill in the art to perform

a simple substitution of Segond's disambiguation classification method with Li's

information gain based term classification method, because Li's classification and

Segond's disambiguation both categorize/classify text, and so one of ordinary skill in the

art could have substituted one classification method for another to obtain a predictable

result of classified text.

As per Claim 10, Segond teaches a method, comprising receiving, at a

processor-based device, a communication that comprises at least one word ("input

text… word that has more than one sense", col. 6, lines 32-41; where the text containing

the words is a communication and the words themselves are "communications

comprising at least one word" because they communicate meaning themselves)

classifying the communication by utilizing a joint classifier based on word

information and word class information ("disambiguate a word", col. 6, lines 29-32;

"input text… includes semantically ambiguous word… rule that is applicable to words

that occur in a context designated 'X'… applicable to words that occur in context 'Y'",

col. 6, lines 32-41; "context information can be obtained… context in which word occurs

in input text", col. 6, lines 42-48; "disambiguate… selecting one sense that applies to the

instance of the word", col. 5, lines 59-67; "sense… distinct meanings", col. 5, lines 49-

52; See Response to Arguments, where the disambiguation [joint classification] is

performed by combining information about what the multi-sense ambiguous word is

[word information] and the different context rules/information [word class information,

where the words that occur in a context X are a class/set of words occurring in the

context X] that narrow the number of senses/meanings of the ambiguous word [word

information] to the meaning in the specific context [word class information] using the

word itself [word information] and the rule [word class information].)

Segond fails to teach wherein the joint classifier comprises at least one term-

category matrix characterizing words and word classes selected using information gain

based term selection.

Li teaches wherein the joint classifier comprises at least one term-category

matrix characterizing words and word classes selected using information gain based

term selection ("Information Gain Based LSI… term-document matrix… term is mapped

to a unique row… category is mapped to a unique column", Section 3; "IG score",

Section 2; where the term-document matrix has dimensions of terms and categories

and the LSI is a classifier, and, as discussed above, disambiguation [in Segond] is also

a classification process for words into their correct meanings, and so the classification in

Li can be substituted for Segond's disambiguation classification)

Therefore, it would have been obvious to one of ordinary skill in the art to perform a simple substitution of Segond's disambiguation classification method with Li's information gain based term classification method which includes a term-document matrix, because Li's classification and Segond's disambiguation both categorize/classify text, and so one of ordinary skill in the art could have substituted one classification method for another to obtain a predictable result of classified text.

As per Claim 11, Segond fails to teach wherein a cell i, j, of the term-category matrix comprises information indicative of a relationship involving an i-th selected term and a j-th category.

Li teaches wherein a cell i, j, of the term-category matrix comprises information indicative of a relationship involving an i-th selected term and a j-th category ("M[I,j] cell of the term-document matrix... i-th term occurs in the j-th category", Section 3; where the occurrence count is a relationship between the term and a category).

Therefore, it would have been obvious to one of ordinary skill in the art to perform a simple substitution of Segond's disambiguation classification method with Li's information gain based term classification method which includes a term-document matrix, because Li's classification and Segond's disambiguation both categorize/classify text, and so one of ordinary skill in the art could have substituted one classification method for another to obtain a predictable result of classified text.

As per Claim 12, Segond teaches a method, comprising receiving, at a processor-based device a communication that comprises at least one word ("input text... word that has more than one sense", col. 6, lines 32-41; where the text containing the words is a communication and the words themselves are "communications comprising at least one word" because they communicate meaning themselves)

classifying the communication by utilizing a joint classifier to determine a category for the communication based on word information and word class information, ("disambiguate a word", col. 6, lines 29-32; "input text... includes semantically ambiguous word... rule that is applicable to words that occur in a context designated 'X'... applicable to words that occur in context 'Y'", col. 6, lines 32-41; "context information can be obtained... context in which word occurs in input text", col. 6, lines 42-48; "disambiguate... selecting one sense that applies to the instance of the word", col. 5, lines 59-67; "sense... distinct meanings", col. 5, lines 49-52; See Response to Arguments, where the disambiguation [joint classification] is performed by combining information about what the multi-sense ambiguous word is [word information] and the different context rules/information [word class information, where the words that occur in a context X are a class/set of words occurring in the context X] that narrow the number of senses/meanings of the ambiguous word [word information] to the meaning in the specific context [word class information] using the word itself [word information] and the rule [word class information].)

Segond fails to teach wherein the determination of the joint classifier is based on an information gain based term selection, i) calculating information gain values for each

word in the received communication, a given one of the terms comprising a word or a word class, ii)sorting the terms by their information gain values in a descending order, iii) sets a threshold as the information gain value corresponding to a specified percentile, and iv) selects the terms having an information gain value greater than or equal to the threshold.

Li teaches wherein the determination of the joint classifier is based on an information gain based term selection ("Information Gain Based LSI Algorithm", Section 3),

i) calculating information gain values for each word in the received communication, a given one of terms comprising a word or a word class ("terms are selected and used… according to IG criterion… sort the terms", Section 3; "terms in documents", Section 1, paragraph 1; where sorting terms by their IG values means that each term had its IG value calculated such that they can be sorted, and the terms are in documents that communicate information [received at the input to the classification system], and documents contain words and so the terms in this context are words)

ii)sorting the terms by their information gain values in a descending order ("sort the terms by their IG values in descending order", Section 3)

iii) sets a threshold as the information gain value corresponding to a specified percentile, and ("select top p percentile of terms according to the IG score distribution", Section 3; where taking the top p percentile sets the lowest of that p percentile as the threshold IG score)

iv) selects the terms having an information gain value greater than or equal to the threshold ("select top p percentile of terms", Section 3; where taking the top p percentile takes all terms exceeding the lowest IG value in that percentile).

Therefore, it would have been obvious to one of ordinary skill in the art to perform a simple substitution of Segond's disambiguation classification method with Li's information gain based term classification method which includes calculating information gain values, sorting, setting a threshold and selecting terms greater than or equal to the threshold, because Li's classification and Segond's disambiguation both categorize/classify text, and so one of ordinary skill in the art could have substituted one classification method for another to obtain a predictable result of classified text.

As per Claim 13, Segond fails to teach wherein the selected terms are processed to form a term-category matrix utilizable by the joint classifier in determining one or more categories for at least one word.

Li teaches wherein the selected terms are processed to form a term-category matrix utilizable by the joint classifier in determining one or more categories for at least one word ("construct the term-document matrix... based on terms selected from... categorize... enhanced term-document matrix", Section 3).

Therefore, it would have been obvious to one of ordinary skill in the art to perform a simple substitution of Segond's disambiguation classification method with Li's information gain based term classification method constructing a term-document matrix from selected terms and classifying with the term-document matrix, because Li's

classification and Segond's disambiguation both categorize/classify text, and so one of ordinary skill in the art could have substituted one classification method for another to obtain a predictable result of classified text.

As per Claim 14, Segond fails to teach wherein the joint classifier comprises a joint latent semantic indexing classifier

Li teaches wherein the joint classifier comprises a joint latent semantic indexing classifier ("latent semantic indexing", Abstract; "conventional approach, the term-document matrix... additional module of IG", Section 3; where the "joint" classification uses a combination of term-document matrix and IG).

Therefore, it would have been obvious to one of ordinary skill in the art to perform a simple substitution of Segond's disambiguation classification method with Li's joint LSI categorization/classification method, because Li's classification and Segond's disambiguation both categorize/classify text, and so one of ordinary skill in the art could have substituted one classification method for another to obtain a predictable result of classified text.

8.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Segond, as applied to Claim 1, above, and further in view of Mihalcea ("Bootstrapping Large Sense Tagged Corpora").

As per Claim 7, Segond fails to teach wherein a plurality of terms is generated by appending a class corpus to a word corpus.

Mihalcea teaches wherein a plurality of terms is generated by appending a class corpus to a word corpus ("Word Sense Disambiguation [WSD] systems... start with a set of seeds that are used to extract text snippets from the Web, which are then added to the sense tagged corpus to identify other instances of ambiguous words that can be accurately sense tagged... added to the set of seeds", Section 1; "assigning the most appropriate meaning to a polysemous word within a given context", Section 2; "Table 2 lists the starting seeds for channel... used to extract snippets from the Web... thousands of pages retrieved for each seed.... Corpus build using only the initial set of seeds consists of 393 examples... new seeds are employed to extract additional passages... appended to the set of examples", Section 4; Tables 1-3; where in the example Table 2 forms a corpus [i.e., a collection of texts] for a set [i.e., a class] of words/senses corresponding to the word channel, and so it is a corpus for that "channel" class of senses [i.e., a class corpus] and the new snippets that are bootstrapped/appended to Table 2 to form Table 3 form another corpus [collection of texts] of words, and so constitute a word corpus).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Segond to include the teaching of Mihalcea of wherein a plurality of terms is generated by appending a class corpus to a word corpus, in order to expand available information useful for performing word sense disambiguation, as described by Mihalcea (Introduction).

9.   Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segond, as applied to Claim 1, above, and further in view of Ringger et al. (US 6,606,597), hereafter Ringger.

As per Claim 8, Segond fails to teach wherein a plurality of terms is generated by joining sets of multiple words with corresponding sets of word classes.

Ringger teaches wherein a plurality of terms is generated by joining sets of multiple words with corresponding sets of word classes ("training corpus is a large body of text... augmented with a tag... noun 'object'... indicating that it is a noun... verb 'object'... indicating that it is a verb... indicating the definition of the word", col. 9, line 55 – col. 10, line 9; where Segond teaches rules used for determining meaning being derived on corpus information [col. 5, lines 13-15], and Ringger teaches augmenting a corpus with meaning-related information [part-of-speech], and so the combination teaches rules being derived from a corpus containing terms that are made of [multiple] words in the corpus tagged with their parts-of-speech [sets of word classes] as per Ringger)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Segond to include the teaching of Ringger of wherein a plurality of terms is generated by joining sets of multiple words with corresponding sets of word classes, in order to provide additional useful information pertaining to the different meanings of words, as described by Ringger (col. 9, line 55 – col. 10, line 9).

As per Claim 9, Segond fails to teach wherein a plurality of terms is generated by interleaving individual words with their corresponding word classes.

Ringger teaches wherein a plurality of terms is generated by interleaving individual words with their corresponding word classes ("training corpus is a large body of text… augmented with a tag… noun 'object'… indicating that it is a noun... verb 'object'… indicating that it is a verb… indicating the definition of the word", col. 9, line 55 – col. 10, line 9; "OBJECT/N", col. 2, lines 3-5; where Segond teaches rules used for determining meaning being derived on corpus information [col. 5, lines 13-15], and Ringger teaches augmenting a corpus with meaning-related information [part-of-speech], and so the combination teaches rules being derived from a corpus containing terms that are made of [multiple] words in the corpus tagged with their parts-of-speech [sets of word classes] as per Ringger. Also, Ringer shows that the tag /N is inserted right next to its word OBJECT to form OBJECT/N and so this constitutes "interleaving" since is attaches the tag next to the word [applicant's Specification, Figure 5])

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Segond to include the teaching of Ringger of wherein a plurality of terms is generated by interleaving individual words with their corresponding word classes, in order to provide additional useful information pertaining to the different meanings of words, as described by Ringger (col. 9, line 55 – col. 10, line 9).

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ERIC YEN whose telephone number is (571)272-4249.

The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

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EY 3/6/10
        /Richemond Dorvil/
        Supervisory Patent Examiner, Art Unit 2626